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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,195	05/12/2005	Jichu Chen	LPTF06	6433
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J C PATENTS, INC. 4 VENTURE, SUITE 250 IRVINE, CA 92618			EXAMINER KURTZ, BENJAMIN M	
			ART UNIT 1797	PAPER NUMBER
			MAIL DATE 01/23/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/510,195	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> Benjamin Kurtz	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 18-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. Applicant is required to submit references CN 2441972Y, CN 2436649Y and JP 7279572A. These references were cited as "X" references by the PCT search authority for PCT/CN03/00129, the current application being the national stage application for said PCT application. The cited references were not retrievable by the examiner for consideration.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: figure 6 contains the reference number (2) that is not in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

3. Claims 20 and 23 are objected to because of the following informalities: Claim 20 recites "...a pipe body lengthen-fixed at each end..." which is believed to be a typo and should read "...a pipe body length, fixed at each end..." Claim 23 recites in line 2 "...the mesh sleeve.14.," the addition of the numeral 14 appears to be a typo.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 2 and 18-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 20 and 24 recite a bottom diffusion mesh and one or more twill weave meshes. Applicant continues to recite one or more twill weave meshes fixed on an outer surface of the bottom diffusion mesh. It appears the one or more twill weave meshes are the same but is unclear from the wording of the claim. For examination purposes the one or more twill weave meshes are assumed to be the same meshes fixed on the surface of the diffusion mesh.

Claim 20 recites the limitation "the composite metallic filtering mesh" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim. For examination purposes the sand control screen is assumed to comprise a mesh sleeve formed of a composite metallic filtering mesh.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "meshes" in claims 19, 22 and 25, is assumed to be used by the claim to mean "mesh size", while the accepted meaning is "multiple mesh structures." The term is indefinite because the specification does not clearly redefine the term.

Claim 25 recites, "an inner pipe is fixed on the inner side of the inner protective shroud". This limitation is present in claim 24 and appears to be a duplicate recitation of the same inner pipe of claim 24. It is unclear as this appears to be the same element previously recited and is assumed to be the same element as previously recited in claim 24.

All other claims are rejected as depending from claims 1 or 20.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Richard et al. US 5 611 399 or Voll et al. US 5 624 560.

Richard teaches a composite metallic filtering mesh, comprising: a bottom diffusion mesh (14) and a twill weave mesh (22) fixed on the surface of the bottom diffusion mesh (fig. 1, 4, 8). The remainder of the claim is directed to intended use and does not further structurally limit the claim.

Voll teaches a composite metallic filtering mesh, comprising: a bottom diffusion mesh (12) and a twill weave mesh (14) fixed on the surface of the bottom diffusion mesh (fig. 1, col. 3, lines 13-22). The remainder of the claim is directed to intended use and does not further structurally limit the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richard '399 or Voll '560 in view of Whitlock et al. US 6 006 829.

Regarding claim 2, Richard and Voll teach the filtering mesh of claim 1 but do not teach the twill weave meshes are two or more layers with an inter-layer diffusion mesh between them. Whitlock teaches two or more filter layers (23) with an inter-layer diffusion mesh (27) between the layers of the filter layers and an inter-layer diffusion mesh fixed on an outer surface of the filter layers (fig. 2, 3, col. 5, lines 28-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the diffusion layers between filter layers to permit edgewise flow of fluid (col. 5,

lines 28-37). Having multiple layers of filter material would be obvious to one of ordinary skill in the art as the feature is present in the prior, it provides a more complete filtering of the fluid by trapping additional materials and is only a duplication of parts. *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007). Mere duplication of parts has no patentable significance unless a new and unexpected result is produced, *In re Harza*, 124 USPQ 378 (1960).

Regarding claim 18, Whitlock further teaches a metal fiber layer (27) is fixed on the outer surface of the filter mesh (fig. 2, 3, col. 7, lines 20-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the metal fiber layer on the outer surface of the filter mesh to allow ready edgewise flow characteristics between the outer cage and the outermost layers of filter material (col. 6, lines 53-56). Whitlock teaches the layers (27) being dimensioned to allow good edgewise flow characteristics (col. 6, lines 53-56) but does not teach the metal fiber layer made of metal wires with 0.05-0.3 mm diameter or the thickness of the metal fiber being 3-30 mm. The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

Regarding claim 19, both Richard and Voll teach the twill weave mesh being 80-100 microns (Richard, col. 4, lines 59-67, Voll, fig. 6 and 7), but do not teach the bottom

diffusion mesh size and Whitlock does not teach the inter-layer diffusion mesh size.

The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

7. Claims 20-22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richard '399 in view of Whitlock '829.

Regarding claim 20, Richard teaches a sand control screen pipe, composed of: a sand control sleeve and a pipe body (10) with through bores (12) and the sand control sleeve fixes on the pipe body and completely covers all through bores on the pipe body, a connecting mechanism is provided on both ends of the sand control screen pipe, the sand control sleeve comprises a mesh sleeve formed of a composite metallic filtering mesh, a tubular inner protective shroud (16) with through bores on it's surface, and support rings (58), an outer protective shroud (32) is fixed on the surface of the mesh sleeve, through bores are opened and distributed on the surface of the outer protective shroud, the composite metallic filtering mesh comprises a bottom diffusion mesh (16) and a twill weaves mesh (22) fixed on a surface of the bottom diffusion mesh, the mesh sleeve is fixed around the outer side of the tubular inner protective shroud, the supporting rings being respectively wrapping set and fixed at connections of the outer sides of the both ends of the tubular inner protective shroud and ends of the mesh



sleeve (fig. 1, 8). Richard does not teach the twill weave meshes are two or more layers with an inter-layer diffusion mesh between them. Whitlock teaches two or more filter layers (23) with an inter-layer diffusion mesh (27) between the layers of the filter layers and an inter-layer diffusion mesh fixed on an outer surface of the filter layers (fig. 2, 3, col. 5, lines 28-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the diffusion layers between filter layers to permit edgewise flow of fluid (col. 5, lines 28-37). Having multiple layers of filter material would be obvious to one of ordinary skill in the art as the feature is present in the prior, it provides a more complete filtering of the fluid by trapping additional materials and is only a duplication of parts. *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007). Mere duplication of parts has no patentable significance unless a new and unexpected result is produced, *In re Harza*, 124 USPQ 378 (1960).

Regarding claim 21, Whitlock further teaches a metal fiber layer (27) is fixed on the outer surface of the filter mesh (fig. 2, 3, col. 7, lines 20-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the metal fiber layer on the outer surface of the filter mesh to allow ready edgewise flow characteristics between the outer cage and the outermost layers of filter material (col. 6, lines 53-56). Whitlock teaches the layers (27) being dimensioned to allow good edgewise flow characteristics (col. 6, lines 53-56) but does not teach the metal fiber layer made of metal wires with 0.05-0.3 mm diameter or the thickness of the metal fiber being 3-30 mm. The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and

the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

Regarding claim 22, Richard teaches the twill weave mesh being 80-100 microns (col. 4, lines 59-67), but does not teach the bottom diffusion mesh size and Whitlock does not teach the inter-layer diffusion mesh size. The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

Regarding claim 24, Richard teaches a sand control screen pipe, comprising: a composite metallic filtering mesh, a multi holes base pipe (32), an inner protective shroud (16) and a plurality of supporting rings (58) of the inner protective shroud, wherein the composite metallic filtering mesh comprises a bottom diffusion mesh (18) and a twill weave mesh (22) on the outer surface of the bottom diffusion mesh, the composite metallic filtering mesh is fixed on the inner side of the multi holes base pipe and completely covers all through holes on the multi holes base pipe, the inner protective shroud has petroleum seeping holes, and is fixed on the inner side of the composite metallic filtering mesh and completely covers the composite metallic filtering mesh, the supporting ring of the inner protective shroud is fixed on both ends of the

inner side of the hole area of the multi holes base pipe, the two ends of the inner protective shroud along the axial direction of the multi hole base pipe are fixed respectively on the supporting ring, an inner pipe (10) is fixed on the inner side of the inner protective shroud (fig. 1). Richard does not teach the twill weave meshes are two or more layers with an inter-layer diffusion mesh between them. Whitlock teaches two or more filter layers (23) with an inter-layer diffusion mesh (27) between the layers of the filter layers and an inter-layer diffusion mesh fixed on an outer surface of the filter layers (fig. 2, 3, col. 5, lines 28-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the diffusion layers between filter layers to permit edgewise flow of fluid (col. 5, lines 28-37). Having multiple layers of filter material would be obvious to one of ordinary skill in the art as the feature is present in the prior, it provides a more complete filtering of the fluid by trapping additional materials and is only a duplication of parts. *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007). Mere duplication of parts has no patentable significance unless a new and unexpected result is produced, *In re Harza*, 124 USPQ 378 (1960).

Regarding claim 25, Richard teaches the twill weave mesh being 80-100 microns (col. 4, lines 59-67), and parts (28) are set on both ends of the multi holes base pipe (fig. 1), what the parts are for is a recitation of intended use and does not further structurally limit the claim. Richard does not teach the bottom diffusion mesh size and Whitlock does not teach the inter-layer diffusion mesh size. The only difference between the claimed invention and the prior art is a recitation of relative dimension. [W]here the only difference between the prior art and the claims was a recitation of

relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device, *Gardner v. TEC Systems, Inc.*, 220 USPQ 777 (1984).

8. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richard '399 in view of Whitlock '829 as applied to claim 20 above, and further in view of Ilfrey et al. US 5 858 691.

Richard further teaches ring hoops are fixed respectively on the outer sides of both ends of the mesh sleeve (fig. 1), but neither Richard nor Whitlock teaches two or more support blocks. Ilfrey teaches a sand control screen pipe with a pipe body (501) having two or more supporting blocks (62) provided on an outer surface of the pipe body (fig. 2D). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the supporting blocks of Ilfrey because the element provide stabilization in the bore (col. 11, lines 59-65).

### **Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Kurtz whose telephone number is 571-272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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1/18/08 /BK/

Benjamin Kurtz  
Patent Examiner  
Art Unit 1797

A handwritten signature in black ink, appearing to read 'Krishnan Menon', with a stylized, cursive script.

**KRISHNAN MENON  
PRIMARY EXAMINER**